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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,823	10/04/2005	Soo-Guy Rho	YOM-0240	9197
23413 7590 07/24/2008 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER ALMEIDA, CORY A				
ART UNIT		PAPER NUMBER		
2629				
MAIL DATE		DELIVERY MODE		
07/24/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/525,823

**Applicant(s)**

RHO ET AL.

**Examiner**

CORY A. ALMEIDA

**Art Unit**

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yasui, US-4822142.

3. In regards to claim 1, Yasui discloses an array of a plurality of alternately arranged first and second rows of pixels (Fig. 9), each first row including red, blue and green pixels or red, green and blue pixel arranged in sequence (Fig. 9) and each second row including red, blue and green pixels or red, green and blue pixel arranged in sequence and having an arrangement shifted by one pixel from the first row (Fig. 9), each pixel including a pixel electrode (Fig. 9, 1) and a thin film transistor (Fig. 9, 4), a plurality of gate lines extending in a row direction for transmitting a gate signal to the pixels (Fig. 9, 2), and a plurality of data lines extending in a column direction for transmitting data signals to the pixels (Fig. 9, 3).

4. In regards to claim 1, Yasui discloses the liquid crystal display is rendered (Col. 1, 32-36).

5. In regards to claim 6, Yasui discloses a passivation layer interposed between the pixel electrodes and the gate lines and the data lines, made of low dielectric material,

Art Unit: 2629

and having a plurality of contact holes for connecting the thin film transistors and the pixel electrodes (Col. 1, 13-21).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasui, US-4822142 in view of Rushmeier, US-6686921.

Yasui does not disclose expressly a pixel group for rendering includes a center pixel and a plurality of peripheral pixels having weights depending on a distance from the center pixel, or that the weight becomes large as the distance from the center pixel increases.

Rushmeier discloses weights assigned to each pixel are increased depending on the distance from the center toward the edge (Col. 11, 48-55).

At the time of the invention it would have been obvious that the method of Rushmeier could have been applied to the pixel structure of Yasui.

The motivation for doing so would have been to create seamless, artifact free color characteristics as Rushmeier discloses (Abstract).

Therefore, it would have been obvious to combine Rushmeier with Yasui to obtain the invention as specified in claims 3 and 4.

8. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasui, US-4822142 in view of Prince, US- 5473338.

In regards to claim, Yasui does not disclose expressly each data line includes a connection portion for receiving data signals from an external device.

Prince discloses receiving video signal data from an external source (Col. 9, 8-12).

At the time of the invention it would have been obvious that one could use external video data as Prince discloses in conjunction with Yasui.

The motivation for doing so would have been to allow the display device to utilize external sources such as cable boxes, video game systems, VCRs, etc...

Therefore, it would have been obvious to combine Prince with Yasui to obtain the invention as specified in claim 5.

9. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasui, US-4822142 in view of Rushmeier, US-6686921.

Yasui discloses a method of driving a liquid crystal display including a plurality of pixels (Fig. 9, 1) including a plurality of switching elements (Fig. 9, 4), a plurality of signal lines connected to the switching elements (Fig. 9, 2 and 3), the method comprising providing data voltages to the data lines (Col. 5, 33-47), and turning on the switching elements to transmit the data voltages to the pixel electrodes (Col. 5, 33-47).

Yasui does not disclose expressly weighting the pixels for rendering based on a pixel group including a center pixel and a plurality of peripheral pixels such that weight for the pixels depends on a distance from the center pixel, the data voltages having

values depending on the weight, or that the weight becomes large as the distance from the center pixel increases.

Rushmeir discloses weights assigned to each pixel, which go with the image data levels, are increased depending on the distance from the center toward the edge (Col. 11, 48-55).

At the time of the invention it would have been obvious that the method of Rushmeier could have been applied to the pixel structure of Yasui.

The motivation for doing so would have been to create seamless, artifact free color characteristics as Rushmeier discloses (Abstract).

Therefore, it would have been obvious to combine Rushmeier with Yasui to obtain the invention as specified in claims 7 and 8.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CORY A. ALMEIDA whose telephone number is (571) 270-3143. The examiner can normally be reached on Monday through Friday 8AM to 4PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CA

7/17/2008

/Alexander Eisen/  
Supervisory Patent Examiner, Art Unit 2629